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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/171,960 | 10/29/1998 | ROBERT D SPINDLEY | 36-1287 | 8693 |

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EXAMINER

FERRIS, DERRICK W

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2663

DATE MAILED: 05/23/2003

16

Please find below and/or attached an Office communication concerning this application or proceeding.

91

Office Action Summary

Application No.

09/171,960

Applicant(s)

SPINDLEY ET AL.

Examiner

Derrick W. Ferris

Art Unit

2663

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 05 September 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/17/03 has been entered.

Response to Amendment

2. **Claims 1-17** as amended are still in consideration for this application. Applicant has amended claims 1, 2, 4, 5, 8-10 and 13-16.

3. Examiner does **not withdraw** the obviousness rejection to *Clarke et al.* in view of *Weisser* for Office action filed 10/17/02 in reference to line item 1-2. See the rejection below for the claims as amended. In short, it is unclear from applicant's specification on what is meant by "impermissible" (or not "allowed" values as possibly defined by applicant) as the term is not explicitly defined in applicant's specification (i.e., how a value is determined to be "impermissible" is not clearly recited in the claims where a further attempt to clarify how the comparison is made might result in a 112-first paragraph rejection). As such, examiner has assumed a reasonable but broad interpretation of the claimed subject matter and respectfully disagrees with applicant. Specifically, examiner's interpretation of the amended limitation "*comparing the value stored in the control field with a set of permissible values, said set being a restricted subset of the plurality of possible values, to determine if the value is permissible or impermissible value, and if the value is determined to be impermissible, overwriting the control*"

Art Unit: 2663

field with a permissible value” is that a match is determined for a set of values (referred to as “permissible values” or “allowed” values as defined by applicant in applicant’s specification on page 8, lines 1-13) where if a match is found where the value in the subset is “impermissible” (i.e., not “allowed” such that this value is not in the “permissible” subset) then the control field is “overwritten” with another value, a value that is “permissible”. Examiner notes support for the assumption comes from applicant’s specification on page 7, lines 11-30. In this section, applicant discloses preventing signaling from third parties (i.e., external sources) such as node B shown in applicant’s figure 2 by overwriting the OPC and DPC fields in general (e.g., in transfer routing the service node might write a value for the DPC field which is not node A, but a point code for another node, outside the region of A such that the access node, node A, will want to change or overwrite the point code back to a permissible value or node A). *Clarke et al.* performs a “selective action” based on a match of predetermined values stored in criteria store 73 [emphasis column 10, lines 48-52]. As pointed out by applicant, if a match is found either a suppressing or modifying action is performed by *Clarke et al.* Examiner is only interested in the modifying action with respect to the claims as amended. In general, a comparison of the value stored in the control field with a set of “permissible” values is taught by the reference (i.e., the first part of the amended limitation). The second part of the amended limitation is what may be at issue of (1) determining if the value is “permissible” or “impermissible” and (2) performing an action if the value is “impermissible” by overwriting the control field. In general, *Clarke et al.* discloses determining if a value is in a set (i.e., “permissible” or “impermissible”) and performing a general action by modifying the MSU data (e.g., the OPC and DPC codes as shown in figure 3) [emphasis column 10, lines 48-52]. Examiner notes that it would have been obvious

Art Unit: 2663

to a skilled artisan, prior to applicant's invention to overwrite the value if the value is determined to be "impermissible" using examiner's reasonable but broad interpretation of "impermissible".

Examiner notes that further support comes from *Weisser* on page 15, lines 10-36 and page 31.

Specifically, *Weisser* discloses that to prevent unauthorized access at a mediated access SCP, the mediated access SCP removes and replaces information with substitute information (i.e., second transaction number) including an OPC code for the purpose of masking the originated party (i.e., node A as referred to by applicant). When the packet is later sent back from a third party or intermediate node (step 148 in Figure 5a of *Weisser*), the MA-SCP compares the received transaction number (i.e., the second transaction number) with database entries (i.e., pre-stored criterion such as that stored in store 73 of figure 6 for Clarke) (step 170) where if there is a match then the MA-SCP obtains the destination info from the database and then sends the packet to the originating party (step 176) [page 31]. In other words, a value is determined to be

"impermissible" (since it contains the second transaction number) such that the value is removed and replaced (i.e., overwritten) with a value that is "permissible" (i.e., the first or original transaction number for node A). The motivation being to prevent unauthorized access (i.e., from a third party). Thus a skilled artisan would have been motivated to overwrite the second transaction number (i.e., "impermissible value") with the first transaction number (i.e., "permissible" value) for the purpose of routing the packet to the originating destination.

Applicant claims that overwriting "impermissible" data with "permissible" data is not analogous to overwriting "second transaction data" (i.e., obscure uninformative data) with "first transaction data" (i.e., informative data) (see applicant's remarks filed 4/17/03 on pages 11-12). Examiner respectfully disagrees given the context of applicant's specification as mentioned previously

Art Unit: 2663

(examiner notes that an intermediate node is outside of region A of a network [page 7, lines 21-22]). As noted from the example presented on page 7, lines 12-30, addresses "A" and "B" are considered "allowed" or "permissible" and an address outside of region A is considered "not allowed" or "impermissible" such as a "second transaction data" (i.e., obscure uninformative data). Stated another way, if an intermediate third party node sends a packet to node A with a DPC of X (i.e., a node address X is "impermissible" since the original address A is masked from the outside), then node A will recognize that address X is "impermissible" and thus translate the address to a "permissible" value of A. Furthermore, examiner notes that applicant discloses transfer routing [page 7, line 20] as part of address translation (i.e., a number translation service) occurs somewhere in region A (i.e., node A or C such as the SCP or access node) on page 6, line 15. Finally, it appears that applicant argues that *Weisser* discloses performing address translation at SCP 26' and not necessarily the access node (i.e., trunk switch 3 or SSP) (i.e., an external source or third party node service provider 27 sends a masked packet back to SCP 26'). Assuming applicant meant the access node, examiner notes that a skilled artisan would have been motivated to offload the address translation functionality to a message interceptor 52 as taught in combination by *Clarke* (i.e., the message interceptor 52 as shown in figure 4 is between a STP 48 and the SCP 50 or with respect to *Weisser* would be between STP 20' and SCP 26' as taught in combination such that the message interceptor acts as an access node).

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Art Unit: 2663

5. **Claims 1, 3-7, and 16** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claims 1 and 5 contain the limitation [external or third party] sources (emphasis plural) which is not taught by applicant's specification. As claims 2, 3, 6-7 and 16 depend on claim 1, these claims also stand rejected. Examiner notes applicant only teaches one respective signal source as supported by applicant's specification on page 1, lines 32; page 2, lines 11; page 3, lines 6-7; page 4, lines 11-12, lines 22-23, lines 33-34; and page 5, line 4. Examiner notes a difference with respect to a plurality of nodes in a network and receiving a signal from one external source (e.g., the subtle differences in steps (a) and (b) on page 4, lines 9-13 in which it takes two nodes in a network to receive a signal, one to transmit and the other to receive). The only support that may be applicable to the amendment is on page 10, lines 7-10 where applicant claims multiple instances of a single instance. However, examiner notes the statement supports receiving from multiple instances of a single source and not necessary from multiple sources as claimed by applicant. Applicant is requested to point support for the amended limitation with respect to the rejection to overcome examiner's rejection.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. **Claims 1-17** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear what applicant means by "impermissible" values/data as the term

Art Unit: 2663

“impermissible” is not explicitly defined in applicant’s specification. Examiner notes the term “impermissible” is recited in all the independent claims. As the dependent claims depend on the independent claims, these claims also stand rejected. To overcome the rejection, examiner is requesting applicant to provide support for the amended claims by showing where the term “impermissible” is supported in the specification (i.e., applicant failed to do so when amending the claims in response to the rejection). As such, examiner’s reasonable but broad interpretation of the claimed subject matter includes “not allowable” for the term “impermissible” as defined by the context given on page 7, lines 11-30 of applicant’s specification in view of the description for figure 5 on page 8, lines 1-13. In this section, examiner notes that applicant includes an example of “transfer routing” which includes address translation using a reasonable but broad interpretation.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. **Claims 1-17 (as amended)** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,550,914 to *Clarke et al.* in further view of WO 95/35633 to *Weisser*.

As to **claims 1, 2, 8, 13, 14, and 15**, figure 4 of *Clarke et al.* (“*Clarke*”) shows an operating node (52) (i.e., message interceptor) connected to a single external source (48 or 49) (i.e., signaling transfer point). The operating node (52) receives messages called “signaling units” (40) as shown in Figure 3 that contain a control field and can be handled

Art Unit: 2663

according to the value(s) in the control field [column 6, lines 30-67; column 7, lines 1-17]. As shown in Figure 5, the message unit (MSU) (52) contains a protocol engine (64,65) for Level 2 protocols (i.e., lower-level of a messaging protocol) and a respective data extraction circuit (66,67) for extracting Level 3 information from each MSU (or “signaling unit”) received at the interface (60). It is noted that each message interceptor may either act as a message suppression action or a message modification action [column 7, lines 47-49] where it is possible to modify different portions of the MSU (or “signaling unit”) including control fields [column 10, lines 35-59]. Thus it may also be implied that subsequently processing the signal in the network may (or could) be dependent on the control field being overwritten or modified.

Not clearly disclosed by *Clarke* are comparing fields of each incoming message with prestored permissible values and taking corrective action in the event of determining at least one value is permissible at a lower layer. Instead *Clarke* acknowledges that this is usually done at a higher layer (Emphasis column 8, lines 36-56 in reference to *Clarke* figure 7). As additional support, *Weisser* ‘633 describes such a comparison but is silent on where such a comparison takes place (examiner notes that the comparison takes place at the same layer that is being compared by applicant). Thus examiner notes that using a broad but reasonable interpretation of the claims, that *Clarke* does perform overwriting certain fields at the lower layer functions (i.e., level 2 protocol engine) [column 2, lines 35-67; column 3, lines 1-2 with strong emphasis on column 2, lines 64-67]. Thus taught by the summary of *Clarke* is that the comparison takes place somewhere along the way (i.e., included in at least one of said transfer means). Taught specifically in the discloser

is that this comparison takes places at layer 3. However, noted in general is that this process takes places as a separate function, prior to the processing of higher layer level processes (such as at the application level). Furthermore, examiner notes applicant's definition of a lower layer is layer 3 with respect to a MSU. Thus it would have been obvious to a skilled artisan prior to applicant's invention using a broad interpretation of the claims to perform a comparison at a lower layer process. In addition, not clearly taught by the reference is a method for communicating between two separate networks where one network is an external network, although the background of *Clarke et al.* suggests a motive for using the operating node (52) to communicate between two related but separate network infrastructures [column 1, lines 19-21]. Thus it is determined by the examiner that it would have also been obvious to apply this solution towards an external network due to the above reason. Furthermore, in a separate application that also provides mediation between two control signaling networks, *Weisser* discusses in the abstract a method of mediation of data packet traffic across a particular interface between the Advanced Intelligent Network (AIN) (i.e., communications network) operated by a local exchange carrier and a non-local exchange carrier service provider (i.e., signal source external to the communications network). The *Weisser* reference also points out similar anticipations to the elements described above. Finally, examiner notes that *Clarke* may be silent or deficient to overwriting the control field of a permissible value if the value is determined to be impermissible. Examiner notes that this also would have been obvious prior to applicant's invention given the teachings of *Weisser*. Specifically, *Weisser* discloses masking an originating nodes address such that when communicating

with an originating node, the OPC field is overwritten from an “impermissible” value (i.e., the second termination number) to a “permissible” value (i.e., the first or originating number). Examiner notes *Clarke* provides the support in general of modifying (i.e., overwriting) an MSU which includes an OPC field based on a match using the data modification circuit 79 [column 10, lines 35-58] where the packet may come from more than one external source (i.e., a third party node).

Since these two references attempt to solve the same problem of control protocol mediation, it would have also been obvious to combine these references so that an external network (as taught by *Weisser*) is used in lieu of a separate network that may or may not be external. Both references disclose signaling in a telecommunications network in general and an SS7 network specifically, thus creating a motivation for combining the subject matter as a whole for both references.

As to **claims 3, 9 and 16**, *Clarke et al.* teaches a protocol engine (62, 63) that acts generally in the same manner as a standard Level 2 protocol engines for the message transfer point (MTP) [column 7, lines 64-69]. It is also pointed out that the operation of the link portion (62) is maintained at link level (MTP Level 2) by the protocol engine [column 8, lines 23-30] when Level 3 information (i.e., network layer functions) is extracted.

As to **claim 4 and 10**, figure 3 of *Clarke et al.* shows a routing field (43) used for routing the MSU. Although *Clarke et al.* does not discuss inserting a predetermined destination point code (14) into the MSU it would have been obvious given the reference to modify a predetermined destination point code (14) using a predetermined address

Art Unit: 2663

since the reference allows routing information to be changed within the MSU using the modification circuit (79) [column 10, lines 35-58].

As to **claim 11**, see the same reasoning behind the rejection to claim 10.

As to **claims 5, 6, 7 and 12**, the routing of signals in the reference could be of type SS7 (a common channel signaling protocol) over a point-to-point connection as shown in Figure 4 [column 4, lines 54-60].

As to **claim 15**, see the same reasoning behind the rejection for claim 15.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derrick W. Ferris whose telephone number is (703) 305-4225.


The examiner can normally be reached on M-F 9 A.M. - 4:30 P.M. E.S.T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (703) 308-5340. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 305-3900.

Derrick W. Ferris
Examiner
Art Unit 2663


DWF
May 22, 2003


MELVIN MARCELO
PRIMARY EXAMINER